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MASTERS IN PUBLIC HEALTH



Rajiv Gandhi University of Health Sciences, Karnataka
4th 'T' Block, Jayanagar, Bangalore - 560 041

MASTERS IN PUBLIC HEALTH

Regulations and Curriculum



**Rajiv Gandhi University of Health Sciences, Karnataka
4th 'T' Block, Jayanagar, Bangalore - 560 041**

Evolve a Framework
For Definition of Public Health
(India Relevant)

Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore

The Emblem



The Emblem of the Rajiv Gandhi University of Health Sciences is a symbolic expression of the confluence of both Eastern and Western Health Sciences. A central wand with entwined snakes symbolises Greek and Roman Gods of Health called Hermis and Mercury is adapted as symbol of modern medical science. The pot above depicts Amrutha Kalasham of Dhanvanthri the father of all Health Sciences. The wings above it depicts Human Soul called Hamsa (Swan) in Indian philosophy. The rising Sun at the top symbolises knowledge and enlightenment. The two twigs of leaves in western philosophy symbolises Olive branches, which is an expression of Peace, Love and Harmony. In Hindu Philosophy it depicts the Vanaspathi (also called as Oushadi) held in the hands of Dhanvanthri, which are the source of all Medicines. The lamp at the bottom depicts human energy (kundalini). The script "Devahitham Yadayahu" inside the lamp is taken from Upanishath Shanthi Manthram (Bhadram Karnebhi Shrunuyanadev...), which says **"May we live the full span of our lives allotted by God in perfect health"** which is the motto of the Rajiv Gandhi University of Health Sciences.

Rajiv Gandhi University of Health Sciences, Karnataka, Bangalore

Vision Statement

The Rajiv Gandhi University of Health Sciences, Karnataka, aims at bringing about a confluence of both Eastern and Western Health Sciences to enable the humankind "Live the full span of our lives allotted by God in Perfect Health"

It would strive for achievement of academic excellence by
Educating and Training

Health Professionals who

- ❖ Shall recognize health needs of community,
- ❖ Carry out professional obligations Ethically and Equitably and in keeping with National Health Policy,

It would promote development of scientific temper and Health Sciences Research.

It would encourage inculcation of Social Accountability amongst students, teachers and Institutions.

It would Support Quality Assurance for all its educational programmes.

Motto

Right for Rightful Health Sciences Education

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SECTION I

Regulations

Eligibility

Candidates for admission to MPH course should have any health science related bachelor's degree (MBBS, BDS, BHMS, BUMS, BAMS, BPT, B. Pharm, B.Sc. in Allied Health Sciences or equivalent degree) with minimum 50% marks from any university established under law considered equivalent thereto by RGUHS. The candidate shall have obtained permanent registration in the respective state council where applicable. In case of SC/ST candidates the minimum marks shall be 45%.

Medium of Instruction

English shall be the medium of instruction for the subjects of study as well as for the examination.

Duration of study

The duration of the course shall be on full time basis for a period of **two** years from the commencement of the academic term.

Course of study

The course shall be pursued on full time basis. No candidate shall be permitted to work in a health care facility or a related organization or laboratory or any other organizations outside the institution while studying the course. No candidate shall join any other course of study or appear for any other examination conducted by this university or any other university in India or abroad during the period of study.

At a later stage MPH could be opened to

Management

Law

IT

Engineering

(CHLP experience &
SOPHARA)

Social Sciences & Humanities Students with Masters

Pedagogical Approaches

Books are the best teachers, but experience makes man perfect. The proficient and lively theory classes shall be equally blended with various practical applications and group activities such as:

1. Assignment
2. Group Discussions
3. Role Plays
4. Case Studies
5. Seminar Presentations
6. Concurrent Placement
7. Management Games
8. Extempore Sessions
9. Self assessment and Transactional analysis
10. Negotiations
11. O.B. Lab experiments
12. Workshop
13. Field Studies
14. O.B. Quiz
15. In basket exercises
16. Brain Storming

All these aimed for the overall development of the emerging health system administrators, especially in decision making, critical analysis and assessment of situations, creative thinking and proactive measures towards system management.

- Didactic
- Interactive/Participatory
- Field visits/posing/studies Should be emphasised in MPH (Prackitioner oriented)

↓

II year. • Study - Thesis
 • Public Health Action
 (Training
 Health Promotion
 Policy Action)
 Mobile clinics
 and camps

State Programme

SHSRC/SIHFW
 SOCHARA/IPH

NIMHANS/

PSM Dep'ts

← Internship in PH system (3 months)

Subjects

Table – I. Subjects prescribed for the four semesters

Year	Sl. No	Subject
1 Semester	1	Introduction to Public Health Practice
	2	Epidemiology
	3	Biostatistics → Public health
	4	Health Education and Health Promotion
	5	^{approaching/ aspects of} Social and Behavioural Health ^
2 Semester	6	Demography
	7	Public Health Nutrition ^{Approaches to}
	8	→ Environmental and Occupational Health
	9	→ Infectious and Chronic Diseases
	10	Health policy , Health Economics, and Healthcare Finance
3 Semester	11	Health Systems Management and Health Planning
	12	Public Health Informatics
	13	Women's health , Child health and Family welfare
	14	Public Health Leadership and Management
	15	Research Methodology ^{in Public Health}
4 Semester	16	Public health project/field experience

Public Health Approaches to

Public Health approaches to

Teaching hours

The teaching hours for first to fourth semesters are shown in Table II.

Teaching hours

Theory

3 hours per week X 4 weeks X 5 months = 60 hours

Practical

2 hours per week X 4 weeks X 5 months = 40 hours

100 hours per subject

5 subjects per semester for 3 semester, + final semester project/field experience

Total 1500 + 675 = 2175 hours

Semester	Theory	Healthcare organization/practical training / Field Visit	Total
First	300	200	500
Second	300	200	500
Third	300	200	500
Fourth		675	675
Total	900	1275	2175

Table II. Distribution of Teaching hours for Theory, Hospital / Practical training and Field Visit

Theory: 15 theory classes in first, second and third semester per week and 10 hours of practical per week.

Practical exposure

Healthcare organization/ Community centres / Practical training:

The students shall spend 2 hours per day training. All candidates shall undergo training in various PHC's, NGO's, and Government Healthcare Organizations. They will prepare a report at the end of each posting and the same should be evaluated by the faculty. Practical hours may be used also for interactive sessions, seminars and symposia.

Attendance

Every candidate shall have attended at least 80% of the total number of theory and hospital/practical training classes conducted from the date of commencement of the term to the last working day as notified by university in each of the subjects prescribed for that semester separately, in theory and hospital/practical training. Only such candidates are eligible to appear for the university examination in their first attempt. A candidate lacking the prescribed percentage of attendance in any subject either in theory or hospital/practical training in the first appearance will not be eligible to appear for the University Examination in that particular subject.

Monitoring Progress of Studies

Work Diary/Record Book- Every candidate shall attend symposia, seminars, conferences, journal review meetings and lectures during each semester as prescribed by the department and not absent him/her from work without valid reasons. Every candidate shall maintain a work diary and record of his/her participation in the training programme. (Refer section III for model check lists and record book). Special mention may be made of the presentations by the candidate as well as details of organization /practical training work conducted by the candidate. The work diary and record shall be scrutinized and certified by the concerned faculty members.

Project Work/Field Experience or Internship

Each candidate pursuing MPH Course is required to carry out Project Work/field experience or internship on a selected topic under the guidance of a recognized post graduate teacher after the submission of project proposal.

Project Work

The topic for the Project Work should be chosen based on an area of interest and should be done in a reputed organization as described in the University guidelines. The student should choose the organization for the project work in any place where they could work under the constant guidance of the academic advisor and project supervisor/field supervisor allotted. The aim of the project work is to enable the student to gain an in-depth insight into a particular field or topic chosen for study.

Project work guidelines

Every candidate who is interested in project work shall submit to the Registrar (Academic) of the University in the prescribed proforma, two hard copies of project proposal containing particulars of proposed project work within 6 months from the date of commencement of the course or on or before the date notified by the University. The project proposal shall be sent through proper channel.

The University shall arrange for review of project proposal and if found suitable shall register the Project topic. No change in the Project topic shall or guide shall be made without prior approval of the University.

The Project shall be written under the following headings:

- Introduction
- Aims or objectives of study
- Review of literature
- Materials and methods
- Results
- Discussion
- Conclusion
- Summary
- References
- Tables
- Annexure

The written text of Project shall not be less than 50 pages and shall not exceed 100 pages excluding references, tables, questionnaires and other annexure. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should not be done. A declaration by the candidate that the work was done by him/her shall be included. The project supervisor, head of the department and head of the institution shall certify the bonafide of the Project.

Four copies of Project shall be submitted to the university through proper channel along with a soft copy (CD), three months before the final examinations. It shall be assessed by two examiners appointed by the university, one internal and one external. 100 marks shall be awarded for Project, 50 marks for the work (written content) and 50 marks for presentation. Acceptance of the Project is a pre-requisite for a candidate to be eligible to appear in the final examination.

Field Experience/Internship

Alternatively student can do a field experience/ practicum/ capstone project in any organization under the guidance of academic advisor and field supervisor.

Field experience/ internship is considered an important part of the academic curriculum, serving as a structured and significant educational experience that takes place in an agency, institution, or community in any developing or developed country, and under the supervision of Field Supervisors and the guidance of the student's Academic Advisor. The overall purpose of the field experience is to provide an opportunity for students to integrate theory and practice in a public health work environment. The student contributes to a community's resources and to the solution of public health problems while developing personal confidence and leadership skills as a public health professional. While in work students could synthesize, hone skills and competencies in program design, implementation, management, and evaluation; research data collection, analysis, and reporting; and policy analyses and advocacy.

The field experience may include work in administrative, research, or clinical settings, or participation in ongoing health education, research, or program activities. The topics are individually selected and tailored to meet student needs. Decisions on the nature, location, objectives, and activities of the field experience are made through discussion and agreement among the student, academic advisor, and site/field supervisor.

The Site/Field Supervisor

The site/ field supervisor oversees the field experience at the chosen site. The site supervisor should have expertise in assigned project areas, experience and status within the organization, and an interest and competence in supervising and mentoring. The site supervisor also helps the student develop the MPH field experience activities (along with the Academic Advisor), and reviews and signs the Learning Contract prior to the field placement. Finally, the site supervisor writes a final evaluation of the field experience.

Academic Advisor (AA)

The Academic Advisor would be one of the internal faculties from the institute or any faculty designated by the institute who is eligible to be the project guide. The AA advises and assists the student with the field experience site selection. Identifies and focuses coursework to prepare for the field experience, Academic advisor would review and

approve the student's Field Experience Plan, communicates with Field Experience Supervisor, reviews the required student reports, student logbook and evaluations.

Student Field Experience Plan

Students pursuing a Field Experience (FE) are required to complete a FE Plan in collaboration with their Academic Advisor and Field Supervisor. The plan includes a goal, learning objectives, specific strategies and activities for accomplishing those goals, timeline for completing goals, and any other considerations that may impact their field experience, and methods of evaluating goal accomplishment (the deliverables). It is important that the student's objectives, strategies, and evaluation methods are realistic, appropriate, meaningful, and measurable. Details of the student's plan are developed and agreed to jointly by the student, field supervisor, and Academic Advisor. It represents the three-way agreement that is integral to the field experience.

Revisions of Plan While in the Field

Revisions to the initial FE Plan should be agreed to and submitted to the Academic Advisor and FE supervisor no later than the end of the second week of the placement. The students who fail to register their FE plan will have to work on the initial plan that was agreed. The FE Plan can be revisited and revised. If the FE moves in a different direction, the FE Plan can still be valid but the student must document any revisions, the reasons for the revisions and the results. If the student is unsure about progress, he/she needs to talk with the Field Supervisor, Academic Advisor. Everyone on the team shares a common goal—to help the student have a successful learning experience.

Report

Students will have to maintain a log book, and submit a report based on their experience (format mentioned in project report above).

For other details look at the field experience section at the section II syllabus and contents

Table- III. Distribution of Internal Assessment marks

Semester	Main Subjects	IA Marks	Total marks
First	Introduction to public health practice	20	100
	Epidemiology	20	
	Biostatistics	20	
	Health Education and health promotion	20	
	Social and behavioural health	20	
Second	Demography	20	100
	Public health nutrition	20	
	Environmental and Occupational Health	20	
	Infectious and Chronic Diseases	20	
	Health policy , health economics, and healthcare finance	20	
Third	Public health informatics	20	60
	Women's health , Child health and family welfare	20	
	Public health leadership	20	
Fourth	Public health project/field experience		40
	Research Methodology	20	
	Health systems management and health planning	20	

To be eligible to appear for the university examination the student should get minimum 50% marks in internal assessment in each subject.

Internal assessment marks shall not be added to the final marks awarded by the University.

University examination

- i. University conducts two examinations in a year at an interval of not less than four to six months.
- ii. Number of examiners for theory and viva voce shall be two, comprising of one internal and one external examiner appointed by the university.
- iii. Qualification and teaching experience required for appointment as an examiner for viva shall be the same as that of Professor or Associate Professor.
- iv. Theory papers will be evaluated by subject experts who are on the approved panel of examiners in RGUHS.

Eligibility to appear in university examination: A candidate shall be eligible to appear for first university examination at the end of six months from the commencement of the course and for subsequent year university examination at an interval of six months provided he/she has satisfactorily completed the prescribed course and fulfilled the prescribed attendance at the end of each semester.

Theory (Written) examination: Theory examination in first and second semester shall consist five theory papers each of three hours duration. Each paper shall carry 100 marks. The third and final semester will have 3 and 2 theory papers respectively of 100 marks each.

The question paper pattern shall be as follows: Long essays – 3 questions of 10 marks each and Short essay – 10 questions of 5 marks each and 10 objective type questions (MCQs, one word, true or false or one sentence) of 2 marks each.

Viva- voce: (50 marks). This shall aim at assessing depth of knowledge, logical reasoning, confidence and oral communication skills. Both internal and external examiners shall conduct the viva-voce. A detailed viva voce examination comprising of syllabi of both years and discussion on the project work shall be conducted after the second year theory examinations by a panel of two university appointed examiners, of who one will be internal and the other external examiner.

Masters in Public Health Curriculum

The particulars of subjects for University examination and distribution of marks are shown in the Table -IV

Table- IV. Subject wise Distribution of Marks for Theory and Viva Voce Examinations.

Year	Number of Theory papers	Subjects	Theory Marks	Viva	Total
First	Paper I	Introduction to public health practice	100	-	500
	Paper II	Epidemiology / <i>Public health</i>	100		
	Paper III	<i>Biostatistics in public health</i>	100		
	Paper IV	Health Education and health promotion	100		
	Paper V	Social and behavioural health	100		
Second	Paper I	Demography	100	-	500
	Paper II	Public health nutrition	100		
	Paper III	Environmental and Occupational Health	100		
	Paper IV	Infectious and Chronic Diseases	100		
	Paper V	Health policy , health economics, and healthcare finance	100		
Third	Paper I	Public health informatics	100		300
	Paper II	Women's health , Child health and family welfare	100		
	Paper III	Public health leadership	100		
Fourth	Paper I	Research Methodology	100		300
	Paper II	Health systems management and health planning	100		
		Public health project/field experience	50	50	
GRAND TOTAL			1550	50	1600

Public Health approaches to

Declaration of pass

For I, II, III and IV semester a candidate shall secure a minimum of 50% marks in each paper in university examination to be declared as pass. In case of IV semester a candidate shall secure a minimum of 50% marks in each paper and 50% of marks in viva voce to be declared as pass. A candidate securing less than 50% of marks as described above shall be declared to have failed in the examination. Failed candidate may appear in subsequent examination after paying fresh fee to the university.

Class/ Rank shall be declared for the examinations on the basis of aggregate marks secured by a candidate at each of these examinations.

- A successful candidate obtaining 60% and more and less than 75% of the marks of the grand total aggregate in the first attempt shall be declared to have passed these subjects in first class.
- A successful candidate obtaining 50% and more and less than 60% of the marks of the grand total aggregate in the first attempt shall be declared to have passed these subjects in Second class.
- A candidate who passes an examination in more than one attempt shall be placed in Pass Class irrespective of the percentage of marks secured.

Carry over

A candidate who has appeared in all subjects of the first, second and third semester in the university examination is eligible to go to the next semester provided he/she has passed in 3 subjects in the current semester. However a candidate has to clear all subjects in order to appear for the fourth semester exam and has to clear all subject in fourth semester to be eligible to receive the degree.

Number of attempts

A candidate is permitted not more than three attempts (actual appearance) to pass the first year examination or within two academic years from the year of admission whichever is earlier. A candidate will not be allowed to continue the course if he/she fails to comply with the above stipulation.

Maximum duration for completion of course: A candidate shall complete the course within four years from date of admission failing which the candidate will be discharged.

Eligibility for award of degree

A candidate shall have passed in all the subjects of first and second year (All four semesters) to be eligible for award of degree

SECTION II

Curriculum

Scope of Public Health

Public Health is the science and art of promoting health, preventing disease, and prolonging life through the organized efforts of the society. Scientific basis for public health practice is provided by study of epidemiology, bio-statistics, environment, demography, nutrition, economics, social and biological sciences. While epidemiology plays a central role, social sciences make essential contributions in the study of determinants of health, and in the development and evaluation of effective public health interventions. Public health actions are directed at whole populations so as to provide safe environment, healthier food and accessible health care.

Despite the successes of the past, current challenges for public health are plentiful. There is a great need for development of public health policies and programs for prolonging healthy life expectancy. Emerging health transition shows that while old threats of communicable diseases continue, new infectious diseases may appear, and increasing incidence of non-communicable disease will overburden the health system in future. A cadre of Public Health Specialists who have sound scientific knowledge and skills to practice public health are required to tackle these emerging problems.

Government of India has highlighted in the National Health Policy 2002 that a large number of specialists should be trained in Public Health. World Health Organization has also emphasized in Calcutta Declaration, the need for Public Health Training.

It is a well-known fact that underlying causes of various diseases very often lie in socio-economic, environmental and behavioural domains rather than in the biomedicine. Thus, with training, both non-medical and medical persons can make contribution to develop Public Health. As physicians have to attend to the pressing needs of the ailing persons, there is acute shortage of public health physicians throughout the world including India. Therefore, in several countries postgraduate courses in public health are being offered for both medical and non-medical graduates. The emphasis in such educational programs as recommended by WHO is on a thorough training in public health administration as well as in epidemiology along with the study of relevant aspects of environmental and social sciences, i.e., health economics, health psychology and sociology.

SOCIAL RELEVANCE Planned improvement in Health system performance can be facilitated by training adequate numbers of policy making and management personnel, including public health specialties, policy analysis, hospital administrators and managers and drug management specialties. These skills are in short supply in most developing countries including India. Public Health often receives little attention in basic medical curricula, specialty training is often inadequate and courses in Medical Schools may be too academic and not relevant to local problems and needs in India. Many countries are exploring and implementing multidisciplinary training programs that include management and communication techniques as well as the traditional public health sciences. An innovative example of public health training designed to produce future leaders is the Union School of Public health in Beijing, Peoples Republic of China, established in 1989 to stimulate public health training in the entire Country. The Beijing School offers a Masters Degree in Public Health (MPH) and draws students and teachers both from health disciplines and from economics management and the social, biological and environmental sciences. The training is also based on problem solving and more than half of the educational exposure and experience is in the form of community service. The Mahatma Gandhi University recognized the importance of starting the MPH Programme in India also and pioneering the programme as a self finance venture under the School of Medical Education.

The mission of the MPH program is to provide leadership and expertise in the fields of public health and epidemiology, health education, developing, health promotion, research and service and endorses the perspective on health promotion as defined by the World Health Organisation (WHO) "Health promotion is the process of enabling individuals, groups and communities to Increase control over the determinants of their health and thereby improve their health".

As public health professionals must act as linking pins between theory and practice, between research and reality, they must be able to communicate effectively with a wide variety of other professionals and people from academia, bureaucracies and service organization in health and development. Therefore the MPH Programme is designed with strong foundation in core subjects such as biostatistics, epidemiology, social and behavioural sciences, health policy, environmental and occupational health as well as other subjects. For accomplishing the mission of the division, various disciplines are involved in the understanding of societal, cultural, biochemical and socio-psychological factors that maintain health or cause disease. The curriculum and the learning process are thus drawn by recognition of multilayered multidisciplinary dimension of public health and development issues in a global perspective.

Objectives of MPH Programme

The program is designed to focus on the acquisition of knowledge and skills applicable to a career in Public Health, for catalyzing the "Health for all revolution". Upon completion of the programme, the postgraduate will be:

1. Aware of the origin and evolution of the field of public health;
2. Able to use concepts and principles associated with health and development problems;
3. Able to understand epidemiological principles and statistical techniques;
4. Able apply these methods in the measurement and assessment of health and development needs of a community;
5. Able to plan, implement and evaluate health and development programme;
6. Able to understand the influences of social, cultural, biochemical and socio psychological factors on health and disease;
7. Able to apply the principles of health promotion in health and development strategies;
8. Able to conduct empirical studies, by formulation of a question of social relevance, collection of reliable and valid data, documentation of the findings, preparing project proposals and its management;
9. Able to professionally manage a health/development system.

The Focus

The MPH program is designed to meet the demand of professionally competent public health graduates in organizations associated with health, and development. The course imparts specialized skills and promotes conceptual and analytical, understanding of management within the unique circumstances prevailing in the health system.

To attain knowledge and practical skills on the subjects of the syllabus as well as to attain a first hand familiarity of the present health scenario, the curriculum provides ample opportunities by concurrent and supervised internship in all the four semesters. Most significant aspect of this method of training is that the scholars will enjoy adequate professional development and thereby equip themselves with modern techniques in the area of specialization.

The training enables the MPH graduates to assume middle level and senior level managerial, leadership and teaching responsibilities in a wide range of organizations and areas, for instance:

- Hospital with community projects
- Voluntary agencies involved in health and development
- International organization and assist/sponsored projects and programs in health and development
- Industrial concerns maintaining community health projects
- In colleges and schools as life style education/Health education, lecturers/Teachers/Experts
- In the central state health systems as a Health educators/Media officers/Technical officers etc.

Focus of
Field works
and Trainings

— The Directorate/KHSDRA/KSAPS
SHSRC/SIHFW
NIMHANS/
SOCHABAI PH/Kannur/GRAND/KHPT/
ISEC/NLSUI/IIIM-B
VGKK/SYVM/NH/

Subjects

The subjects to be perused during the four semesters are shown in Table

Table - v. Subjects prescribed for the four semesters

Year	Sl.No	subject	No of hours		
			Theory	Practical	Total
1 Semester	1	Introduction to public health practice	60	40	100
	2	Epidemiology	60	40	100
	3	Biostatistics	60	40	100
	4	Health Education and health promotion	60	40	100
	5	Social and Behavioural Health	60	40	100
2 Semester	6	Demography	60	40	100
	7	Public Health Nutrition	60	40	100
	8	Environmental and Occupational Health	60	40	100
	9	Infectious and Chronic Diseases	60	40	100
	10	Health policy , Health Economics, and Healthcare Finance	60	40	100
3 Semester	11	Health Systems Management and Health Planning	60	40	100
	12	Public Health Informatics	60	40	100
	13	Women's health , Child health and Family welfare	60	40	100
	14	Public health leadership and Management	60	40	100
	15	Research Methodology	60	40	100
4 Semester	16	Public health project/field experience		675	675
		Grand Total			2175

Public Health Approaches to -

Syllabus and Contents

Semester 1 Paper 1

Introduction to public health

Course description

This course provides the students with broad overview of public health and its various activities.

Objectives

At the conclusion of the course, the student will be able to:

- List and describe the vision, mission, functions and essential services of public health
- Discuss the development in the field of public health
- Understand health disparities
- Identify factors that influence health and determine ways in which health status is measured
- Identify public health's core functions and discuss how these are translated into practice

Contents

- **Basics of public health**
 - What is public health
 - History of public health
 - Evolution of public health
 - Public health as a system
 - Features of public health
 - Importance of public health
- **Concept of health, illness and diseases (health from ecological perspective)**
 - Dimensions of health and disease
 - Determinants of health and disease

- Ecology of health
- Measure health- Indicators of health
- **Measuring health and disease**
 - Morbidity
 - Mortality
 - Various measures
 - Comparisons of health indicators of selected developed and developing countries
 - Economic dimension of health outcomes
- **Core function of public health practices**
 - Relationship between public health and medical care system
 - Role of public health in global society
 - Impact of health disparities on public health
- **Resources of public health**
 - Infrastructure of public health
 - Human resources in public health
 - Organizations- resources
 - Challenges in public health
- **Indian public health system**
 - Public health hospital system
 - Primary care system
 - Integration issues
 - Health programs
- **International health**
 - History of International health
 - International health agencies- WHO, UNICEF, World Bank, UN, UNDP, ILO and other agencies
- **Disaster management**

- Disaster definitions and concepts
- Disaster epidemiology
- Incident command and incident management
- Communication (tactical and risk communication)
- Vulnerable populations in disasters
- Evaluation of disaster response and its implications for planning
- Law and regulation
- Disaster risk assessment

Practicum

- Visit to various NGOs,
- Working of disaster planning
- Public health centres visit

Reference

- Public health: What it is and how it works, - Burnord J, Turnock, Jones and Bartlet Publishers
- Oxford Textbook of Public Health 5th edition , 2009, Author(s): Detels, Roger; Beaglehole, Robert; Lansang, Mary Ann; Gulliford, Martin Oxford University Press (OUP)
- Oxford Handbook of Public Health Practice (Oxford Handbooks Series) by David Pencheon, David Melzer, Muir Gray and Charles Guest (2006)
- Park's Textbook of Preventive and social Medicine, - K.Park, Banarsidas Bhanot (publishers)

Semester 1-Paper 2

Epidemiology *in Public Health*

Course description

This course is designed to introduce the students to epidemiological concepts and methods used to evaluate the distribution and determinants of health and disease in population.

Objectives

At the conclusion of the course, the student will be able to:

- Understand the basic epidemiological methods and study designs
- Understand and discuss population based perspective to examine disease and health-related events
- Discuss the ethical issues in epidemiological research.
- Learn the basic concepts of screening and outbreak investigations.
- Able to critically review published epidemiological studies.
- Applied epidemiology

Contents

- **Introduction to epidemiology**
 - Descriptive and analytical epidemiology
 - History and Evolution of epidemiology
 - Principles of epidemiology
 - Uses of epidemiology
- **Measurements of morbidity and mortality**
 - Fundamental measurements of disease frequencies
 - Prevalence
 - Cumulative incidence
 - Incidence density
- **Risk factors**
 - Relative risk,
 - Attributable risk

- Odds ratio etc
- **Association and causation**
- **Estimation of disease burden**
- **Chance, Bias, confounding factors**
- **Effect modification**
- **Epidemiological study designs**
 - Ecological design
 - Cross sectional
 - Case control design
 - Cohort studies
 - Experimental designs
- **Sources of epidemiological data:**
 - Surveillance
 - Types of surveillance
 - Screening of diseases
 - Validity, reliability
 - Investigation of an outbreak
- **Introduction to epidemiology of communicable and non-communicable diseases**

Practicum

- Investigation of epidemic
- Designing epidemiologic study
- Survey and field visits

Reference

- K.Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers
- Oleckno, William, Essential Epidemiology: Principles and Applications , Waveland Press, Inc., 2002
- Leon Gordis , Epidemiology,
- Ann Aschengrau, Essentials of Epidemiology in Public Health, Jones & Bartlett Publishers

Semester 1-Paper 3

Biostatistics

in public Health

Course Description

This course provides students with basic statistical concepts and techniques that are used in public health. Focus here is towards applied biostatistics.

Objectives

At the conclusion of the course, the student will be able to:

- Understand the basic concepts in biostatistics
- Apply statistical knowledge to designing research studies.
- Determine the appropriate method to be used in analyzing data sets

Contents

- **Introduction**
 - Meaning of Statistics
 - Statistical methodology
 - Branches of Statistics- Bio-Statistics, Vital Statistics, Health Statistics
 - Application of Statistical Methodologies in Public Health Management
- **Data**
 - Meaning and Types of data,
 - Different scales of data measurement
 - Different methods of data collection,
 - merits and demerits of data collection methods under different situations
 - Tabulation of data
 - classification of morbidity, mortality and socio-economic data
 - Graphical presentation of data
- **Measures of central tendency**
 - Calculation of Measures of Central tendency- ungrouped and grouped data
 - Mean, Median and Mode
- **Understanding variability of data through measures of Variability**
 - Calculation and interpretation of Range, Percentiles, Quartiles, Standard deviation and Co-efficient of variation- both ungrouped and grouped data
- **Sample survey techniques-**
 - Types of surveys

- their role in Public health management,
- Planning of surveys,
- Concept of sampling,
- Use of random number tables for selection of samples,
- Different Sampling designs,
- Calculation of sample size for field surveys
- **Probability**
 - Concept of probability,
 - Probability distributions and their applications in Public health management
 - Normal distribution,
 - Binomial distribution,
 - Poisson distribution
- **Testing of hypothesis**
 - Concept of Sampling variation
 - Tests of significance-
 - Z-test,
 - t-tests,
 - Chi square test and
 - Important Non-parametric tests
- Pearsonian Correlation and Regression as prediction techniques
- Introduction to Multivariate Correlation and Regression, Logistic Regression, Odds ratio and their applications in Public Health
- Life table technique and Survival analysis
- Introduction to Planning of Research studies

Practicum

Hands on experience on statistical software.

Reference

- Rao NSN : Applied statistics in health sciences, JP publishers
- Mahajan B.K: Methods of biostatistics, Kothari book depot, A.D Marg, Bombay
- Potti L.R : A text book of statistics, Yamuna publications, Sreekanteshwaram, Trivandrum.
- Lancaster H.O: Introduction to medical statistics, Johnwiley & sons, New York.
- Leius A.E : Biostatistics, Reinhold publishing Co, New York.
- Cotton T : Statistics in medicine, Little Brown & Co, Boston.
- Hill A.B : Principles of medical statistics, Oxford University press, New York.

Semester 1- Paper 4

Health Education and Health Promotion

Course description

This course health education and health promotion introduces students to basics of health education and health promotion pertaining to public health practice.

Objectives

At the conclusion of the course, the student will be able to:

- Develop managerial skills in facilitative change in ways and conditions of health and promote health of people

Contents

Health education

- Definition, objectives, principles, contents
- Application, methods, approaches
- Tools.
- Health education Vs propaganda,
- Adoption process – Roger's model – application.

- **Health communication**

- Introduction
- Principles
- Process
- Application in health
- Models of communication
- Elements of communication
- Factors influencing communication
- Barriers of communication

- **Channels of health communication**

- Traditional
- Modern

- Individual
- Group
- Mass
- Target groups

- **Communication techniques and strategies.**

Health Promotion

- Overview of concepts of health promotion
- The Ottawa Charter – 1986
- Models of health promotion (Biomedical model, behavioural model, socio-environmental model.
- Major theories in health promotion (Behavioral change theories: Health Belief Model, Stages of change theory, social learning theories. Community change theory: diffusion of innovations
- Developing health promotion strategies in community & hospitals
- Role of professional health educator in health promotion

- **Propagation of healthy lifestyle**

- Emerging lifestyle diseases
- Women's health in the context of changing socio-economic pattern in India
- Current health related messages

- **Role of media in health promotion**

- Mass media
- Inter personal communication
- Role of communication in promoting healthy lifestyle

- **Cost effective health promotion strategies**

- Role of corporate in health promotion
- Role of internet viz. email, web portals etc. in health promotion
- Role of government and private sector in health promotion

Practicum

- Writing Health Messages
- Handling Communication Aids

- Developing Communication Campaigns – PLA, FGD, Counseling
- Health education activities in schools, and community
- Health promotion activities

Reference

- Ramachandran & Dharmalingam: Health education – a new approach, Vikas publishing
- Park K, Park's Textbook of preventive and social medicine, M/s Banarasidas, Jabalpur
- ← • Banerji D, Poverty, class and health promotion and protection WHO, Copenhagen
- Health education: creating strategies for school and community health By Glen Gordon Gilbert, Robin G. Sawyer
- Kari S, Lankinen et al: Health and diseases in developing countries, Mac Milan, Press, London
- David Morely: Practicing Health for all, Oxford university press, London
- Banerji D: Health and family planning services in India, Lok Prakash, New Delhi
- WHO: Intersectoral Linkages and health development
- World Bank: World Bank Development report, Washington
- Green A: An Introduction to health planning in developing countries, Oxford University Press
- ✓ • Anita N I I: People health in people hands, the foundation for research in community health
- Ebrahim G M: Primary health care – re-orientation organizational support, Mac Millan, London.

Semester 1-Paper 5

approaches to

Social and Behavioural Health

Course Description

This course provides students with a foundation in behavioral and social science theory, research, and interventions pertaining to public health. Course will provide exposure to a broad range of theories, including the theoretical foundations of social science applications. These theories will be discussed using examples of their applications to numerous public health problems such as HIV/AIDS, violence, cancer, cardiovascular diseases etc.

Course Objectives:

At the conclusion of the course, the student will be able to:

- Identify and analyze the behavioral, social, and cultural factors associated with health and illness.
- Understand and apply theories associated with healthy and unhealthy behavior that draw broadly from the social and behavioral sciences, including psychology, sociology, anthropology.
- Apply social science-based theories to understand and improve health behavior and health communication, public health research and development as well as promote public health preparedness.

Contents

- **Introduction to social and behavioural health**
 - Importance of social and behavioural factors in public health
 - Historical perspectives on population and diseases
 - Social epidemiology
 - Social ecological web
- **Conceptual framework and social science behavioural theories**
 - Health belief model
 - Theory of planned behaviour
 - Models of behaviour changes
 - Transtheoretical and adoption process model.
- **Health and illness behaviour**

- Health behaviours in developing countries
- **Social and cultural context of health**
 - Social cognitive theory
 - Social network theory
 - Diffusion of innovation and social marketing
 - Social reaction to diseases
 - Comparative health cultures
 - Health disparities,
 - Diversity and cultural competencies
 - Deviance and social control
- **Society**
 - Society- types of society
 - Family- types,
 - Social institutions- marriage, family trends, political, religious, economic.
 - Social mobility
 - Social change, - planned and unplanned
 - Industrialization, urbanization and modernization
- **Social pathology in relation to public health**
 - Social problem
 - Crime
 - Slums
 - Delinquency
 - Alcoholism
 - Prostitution
 - Beggary
 - Mental disorders
- **Introduction to applied medical anthropology**

Practicum:

- Visit to NGOs working in specific areas to learn the applied aspects of social theories.
- Designing programmes based on behavioural change etc

Reference

- Social and Behavioural – Foundations of public health- by Jeannie Coreil
- Essentials of health behavior: Social and behavioural theory in public health by Mark Edberg (Jones and Bartlett publishers
- Foster and Anderson; Medical Anthropology, Wiley, New York
- Related web resources

MPH First semester (Theory)

THEORY EXAMINATION

Duration: 3 Hrs

Max Marks: 100

Distribution of Marks

Type of questions	No of questions for each subject	No. of questions and marks for each question	Total Marks
Long Essay	3	3x10	30
Short Essay*	10	10x5	50
Objective type	10	10x2	20

*students are required to attempt 10 out of the 12 short essays.

Semester 2-Paper 1

Demography *for public health*

Course Description

The course enables the students to get acquainted with the population and basic issues in human culture and economic behavior, which are essentially the grounds on which the health issues develop and sustain. The focus of the course is on population growth and dynamics of population growth.

Objectives

At the conclusion of the course, the student will be able to:

- Understand the basics of demography
- Use demographic tools in understanding public health issues Knowledge attitude and practices.
- Discuss global demographic regimes and impact on public health.

Contents

- Introduction: Definition, nature , Scope and importance of demography
- Demography and population Studies
- Source of Data-
 - Indian Censuses: Historical view, salient features of Indian censuses
 - Vital Statistics: Registration of births , deaths Marriages- Act 1966
 - National sample services organization (NSSO),
 - Demographic sample surveys in India, National Family health Surveys (NFHS-I,II,III)
 - U.N Demographic year book.(Annual)
- Development of Demographic Research in India and its relevance for Public Health interventions, Demography & Social Science inter relations, Technical & substantive demography.
- Rates & Ratios, Mid Year Population, measures of fertility and Mortality and morbidity- determinants and differentials across

states and some selected countries, Life table concepts, migration and its relation to Public Health.

- Population Theories-
 - Malthusian Theory, Optimum population Theory, Demographic Transition theory ,
- Critical review: World Population Growth- Regional distribution & impact.
- Population Growth & distribution in India & states
- Population Structure & Characteristics:
- Age, Sex distribution- India & Selected countries
- Marital Status: age at marriage & Public Health Concerns
- Sex ratio in India – Declining trends observed in states causes & consequences.
- Caste & Religious distribution of Population.
- Mortality- Expectation of life at birth Infant mortality – determinants of trends , differentials- India, States & Selected Countries,
 - Age & Sex differentials in mortality – trends causes of death, Patterns- India, States, and selected countries.
 - Causes of mortality decline- developed & developing countries focusing on Indian experience, AIDS- future prospects.
- Concepts of Fertility- Fecundity & fertility, Sterility- Primary, Secondary, abortion, natural fertility- biological limits and social determinants, Physiological factors, role of Social and cultural factors of fertility, still births, levels trends and differentials in fertility.
- Family Planning Programme- Global View, Critical Review of Indian F.P.P Programme, achievements, management , Methods of Birth Control -male ,female methods, Mechanical, Chemical, Natural and other methods, Medical Termination of Pregnancies Act, Post legalisation Scenario in India.

- Population policy- India and China- One Child Policy, 2 child policy- consequences, role of immigration in contemporary world.

Practicum

Practical exercise such as survey, Family planning, KAP studies based on primary and secondary data etc.

Reference

- Bouge Donald: Principles of Demography, Johnwiley & Sons, New York
- Srivastava S.C: Studies in Demography, Jai Prakashnath & Co, Subash Bazar, Meerut, India
- Asha A Bhende & Thara Kanitkar : Principles of population studies, Himalaya Publishing Hse.
- Neelakantan N: A modern treatise in preventive medicine & Community health, Neela publishers, Venu Vilas, Poojapura, Thiruvananthapuram
- Park K: Text book of preventive and social medicine, M/s Banarasidas, Jabalpur
- Barclay G.W.: Techniques of population analysis, Wiley, New York
 - Cox P.R: Demography, England

Semester 2-Paper 2

Public Health Nutrition

approaches to

Course Description:

The public health nutrition course introduces students to the scientific knowledge about food and public health nutrition. The course provides basic understanding of the factors and dynamics involved in public health nutrition and its role in health of community. The focus is on applied nutrition

Objectives

At the conclusion of the course, the student will be able to:

- Understand the concepts of public health nutrition.
- Explain the importance of food and nutrition in public health.
- Assess nutritional status of community and develop necessary intervention.

Contents

- Introduction to public health nutrition
- Basics of nutrition
- Importance of food and nutrition
- Food habits / meal pattern
- Food groups
- Nutritive value of common food items (Cereals, pulses, vegetables, milk, egg, meat, nuts, oils, fruits)
- Balanced diet- principles of formulating balanced diet
- Recommended values of nutrients for children, adolescents, men, women, pregnant and lactating mothers, old age, sports persons etc.
- Diet modification
- Cooking- principles of cooking, methods of cooking, effects of cooking on nutrients on common foods.
- Major nutritional problems of public health importance
- PEM, anaemia, IDD, and their prevention.
- Vitamin deficiency disorder
- Role of nutrition on health and life style diseases.
- Nutrition education – principles and methods of imparting nutrition knowledge.
- Assessment of nutritional status (direct and indirect methods)
- Anthropometric measurement, biochemical, biophysical, clinical measurements.

- Policy and programmes for nutrition.
- Food safety- food borne illness,
- Food additives,
- Fortification,
- Food adulterants
- Prevention of contaminations, food toxicants
- Role of Government: policies and programmes; agriculture development, public distribution system.
- International cooperation for food.

Practicum

- Assess nutritional status of school children, mid day meal etc
- Visit to anganwadi, ICDS etc
- Visit to food processing unit
- Diet survey and other studies

Reference

- Park K: Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur
- Shah P.M.: Early detection and prevention of protein caloric malnutrition, Popular Prakash, Bombay.
- Thankom Jacob: Food adulteration, Mac Millan, New Delhi
- Waterlow J.C.: protein energy malnutrition London TALK 1992.
- Jelliffe DB: The assessment of nutrition status of the community WHO monograph series 53
- ICMR (1981): Recommended dietary intake for Indians, New Delhi
- ICMR (1908) Nutritive value of Indian foods NIN, Hyderabad
- Savage king F: Burgess A: Nutrition for developing countries, Oxford University press 1992
- NNMB (1981): Dietary and nutrition status of population in different states NIN, ICMR.
- Public Health Nutrition (From Principles To Practice) by Mark Lawrence, Tony Worsley Publisher: Allen And Unwin Special Priced Titles (2008)
-

Semester 2-Paper 3

Environmental & Occupational Health

Course Description

This course will provide students a broad introduction to the scientific basis of environmental and occupational health from a public health perspective. The course intends to address the issues in environmental & occupational health, using tools, concepts & methods used in environmental health. Students on completion will be able develop skills on critical analysis of current environmental and occupational health problems.

Objectives

At the conclusion of the course, the student will be able to:

- Learn the basic concepts of environmental health sciences and key environmental health issues.
- Understand the risk assessment concepts, uses , to describe, asses, control and make decision about the environmental health issues.
- Develop skills in analyzing, managing and community about environmental health issues.
- Identify some of the major environmental health hazard.

Contents

- **Fundamentals of environmental health-**
 - Ecosystem,
 - Climate,
 - biomes,
 - Links between environment and human health.
- **Water:**
 - Introduction
 - Properties of water
 - Hydrological cycles
 - Uses of water
 - Water resources- Sources of water supply
 - Water and health

- Water shortage and scarcity
- Water consumption and management
- Sources of drinking water
- Water pollution
- Types of pollution, sources of pollution
- Water treatment
- Purification of water
- Water quality – critical and standards
- Surveillance of drinking water quality.
- **Waste water disposal and treatment**
 - Sewage system
 - Sewage disposal
 - Biological oxygen Demand
 - Public health aspects of sewage
 - Types of disposal
 - Pits privies, septic systems etc
 - Municipal sewage treatment- modern sewage treatment, sulabh souchalay etc
- **Solid and hazardous waste**
 - Definition and characterization of municipal solid waste
 - Sources of waste/ refuse
 - Collection and disposal of solid waster
 - Types of latrines
 - Management of solid waste
 - Dumping, landfills, incinerator, composting manure pits, burial etc
 - Hazardous waste, - sources of hazardous waste
 - Management and disposal of hazardous waste

- Sanitation and excreta disposal : fairs, festivals and public gathering
 - Excreta disposal- public health importance
- **Air, Noise and Radiation**
 - Air- Composition
 - Atmosphere and methods of dispersion
 - Chemical and physical characteristics
 - Health implications of air pollution
 - Air pollution- air pollutants
 - Outdoor and indoor air pollution
 - Prevention of air pollution
 - Ventilation
 - Noise- properties, health effects of noise, control, and regulations
 - Light
 - Radiation- sources, types, and health effects of radiations.
 - Public health importance of air, noise, light, ventilation and radiation
- **Risk assessment**
 - Environmental risk- characteristics
 - Development of risk analysis
 - Tools of risk analysis
 - Process of risk analysis
 - Hazard identification
 - Risk management and communication
 - Risk perception.
 - Environmental laws and compliance
- **Occupational health**
 - Occupational environment/ setting

- Occupational hazards and diseases
- Workplace injuries
- Occupational standard
- Prevention of occupation diseases
- **Rodents, arthropod vector and zoonosis**
- **Environmental degradation and food security**
 - Green revolution
 - Impacts of environmental degradation on health
 - Deforestation, soil degradation
 - Loss of bio-diversity
 - Food security-
 - Role of chemicals and fertilizers on health
 - Food products
 - Food borne illness
 - Global climate change

Practicum

- Visit to sewage treatment Plant, water purification Plant
- Visit to Biomedical waste treatment Plant
- Visit to Fair /Mela/festivals , Industry

Reference:

- Essential Environmental Health by Fries, Jones & Bartlett Publishers – 2007
- Living with the Earth- Concepts of Environmental Health Science- Gary S Morare- Lavis Publications
- Environmental Science- Toward a Sustainable future - Richard T Wright, Dorothy F Boors PHI learning Private ltd- New Delhi, Pearson Education
- Environmental Health by Moeller D.W, Harward University press.
- Park's Textbook of Preventive and Social Medicine, K.Park. Banarsidas Bhanot publishers.

Semester 2-Paper 4

Infectious and Chronic Disease

Course description

The course is designed to provide students with competencies in addressing critical problems in control and prevention of infectious and chronic diseases

Objectives:

At the conclusion of the course, the student will be able to:

- Understand the disease burden and impact of infectious and chronic disease in the society.
- Understand the modes of transmission and pathogenesis of infectious disease and the host, environment relationship.
- Understand and discuss the strategies for diagnosis, prevention and control of diseases
- Application of epidemiological methods to study diseases
- Familiarize with certain infectious and chronic diseases.

Contents

- **Introduction to health and disease**
 - Classification of diseases
 - Disease burden
 - Diseases transmission
 - Disease cycle
 - Introduction to bacteriology
 - Introduction to virology
 - Introduction to Mycology
 - Introduction to parasitology
 - Genetic diseases/ genetics
 - Pediatric diseases/problems
- **Immunology**
 - Immune system

- Types of immunity
- **Epidemiology of infectious diseases**
 - Respiratory infections (Small pox, chicken pox, measles, rubella, mumps, influenza, diphtheria, whooping cough, meningococcal meningitis, acute respiratory infections, SARS, Tuberculosis.)
 - Intestinal infections (Poliomyelitis, viral hepatitis, acute diarrheal diseases, Cholera, typhoid fever, food poisoning, amoebiasis, ascariasis, hookworm infection)
 - Arthropod-borne infections (Dengue, malaria, filariasis,)
 - Zoonoses (Rabies, yellow fever, Japanese encephalitis, chickungunya fever, leptospirosis, plague, salmonellosis
 - Rickettsial diseases
 - Parasitic zoonosis- (hydatid diseases, leishmaniasis)
 - Other infection (Tetanus, leprosy, STD, AIDS)
- **Epidemiology of Chronic and non communicable diseases**
 - Cardiovascular diseases
 - Coronary heart diseases
 - Hypertension
 - Stroke
 - Rheumatic heart diseases
 - Cancer
 - Diabetes
 - Obesity
 - Blindness
 - Accidents and Injuries
 - Mental health
- **National health programmes**

Practicum

- Visit to infectious disease hospitals
- Outbreak investigation
- Survey of Non Communicable Diseases
-

Reference

- K.Parks's Textbook of Preventive and social medicine M/S Banarasidas Bhanot publishers
- Preventive and community medicine by Mathur
- Davidson's Medicine text book.

Semester 2- Paper 5

Health policy, Health Economics and Health Care Financing

Course Description

This course introduces students to the basic health policy planning, process, and health financing

Objectives

At the conclusion of the course, the student will be able to:

- Understand health policy issues pertaining to public health
- Formulating health policy
- Basic introduction to health economics, Budget and finance in health care

Contents

Health policy

- Evolution of public health and medical care
- Concept of health policy
- Normative and value base of health policy
- Population policy, drug policy, medical education policy, policy for children , women and weaker section
- National health policy
- State health policy
- Comparison of various international health policy, (USA, UK, Canada, China, France, Thailand)
- Health policy in the context of market economy
- Implementation of health policy – centre and state governments
- Formulation of health policy
- Health policy planning process, need assessment, prioritization, peoples participation, decentralization
- Health policy analysis
- Evidence based policy
- Policy communication (Writing)

Health Economics

- Introduction- micro and macro approach health economics
- Issues in public health in relation to economics, budgetary issues in public health.
- Fundamentals- demand, supply, consumption, saving, investment
- National income- GNP, NNP, GDP
- Measures economic development

Health care finance

- Introduction- equity
- Health sector reforms, decentralization
- Role of NGO sector (national and global) in health finance
- Budget and financial management- Cost effective analysis, cost benefit analysis and cost utility analysis.
- Economic analysis
- Health insurance: community based health insurance, individual health insurance, and all types of health insurance.

Practicum

Budget planning for various activities

Reference

- Health Economics in India, Himanshu Sekhar Rout, Prasant Panda, 2007
- Health Economics in Development: by World Bank
- Understanding Health Economics by John Rapoport
- Health Economics and Financing by Thomas E Getzen
- Health Economics for Developing Countries: A Practical Guide: by S.Witter, T.Ensor, M.Jowettand R.Thompson
- Health Policy Research in South Asia: Building Capacity for Reform (Health, Nutrition, and Population Series) Abdo S. Yazbeck , David H. Peters

MPH Second semester (Theory)

THEORY EXAMINATION

Duration: 3 Hrs

Max Marks: 100

Distribution of Marks

Type of questions	No of questions for each subject	No. of questions and marks for each question	Total Marks
Long Essay	3	3x10	30
Short Essay*	10	10x5	50
Objective type	10	10x2	20

*students are required to attempt 10 out of the 12 short essays.

Semester 3-Paper 1

(Note: The classes will be held in semester 3 and exams will be held at the end of semester 3)

Public Health Informatics

Course description

The public health informatics course provides students with a basic understanding of Informatics and its application in a Public Health setting. The course provides basic understand the basic technological tools and building blocks needed to develop and manage Public Health data collection systems to meet analytical needs.

Objectives

At the conclusion of the course, the student will be able to:

- Understand the fundamentals of computers organization
- To gain knowledge of various components of database applications and management
- Develop and adopt public health information system as needed to support public health policies, programmes and inventions
- Assist in the development and adoption of appropriate information technology in public health.

Contents

- Introduction and the context for public health informatics
 - What is public health informatics
 - Principles of Public health informatics
 - Components
- Fundamentals of computers
 - Basic elements of computer system- CPU, Input devices, Output devices, hardware, software etc
 - Storage devices
 - Introduction to computer networks
 - Internet and world wide web
- History and significance of information systems and public health

- Information Architecture
- Core competencies in public health informatics
- Assessing the value of information systems
- Managing IT personnel and projects
- Public health informatics and organizational change
- Privacy, confidentiality and security of public health information
- Data standards in public health informatics
- Risk factors in information systems
- Knowledge based information and systems
- Means of data collection- Surveillances
- Fundamentals of database systems
 - MS Access, database design, database table design
 - Variable data types
 - Relational designs
 - Retrieving data from table
 - SQL
- Decision support and expert systems in public health.
- Health information system
 - Principles
 - Structure of HIS, HMIS
 - Data tools and techniques of measurements
 - Computer based patient record
 - Electron health record
 - Electronic population register
 - Evaluation , pit fall and system audit
- Informatics project planning and programmes
- Emerging public health informatics systems
 - Geographic information systems

- Telemedicine: role in delivering health care.
- Biometrics

- **Practicals :**

- Window and GUI.
- Ms Word- full working & practice
- MS Excel- how to operate, developing a work sheet, simple calculations
- MS power Point- how to make a presentation
- Use of internet- access, e-mail, search engine and health related websites, how to search for literature

Reference

- Public health informatics and Information systems, Patric.W.O'Carroll et al, Springer's publishers
- Health care information system- A practical approach for health care management-, Fances Wickham Lee, Karen A Wager
- E-health care information systems
- Introduction to computers, Peter Norton, Tata McGrawHill

Semester 3-Paper 2

(Note: The classes will be held in semester 3 and exams will be held at the end of semester 3)

Women's Health, child Health and Family Welfare

Course Description

This course introduces students to the basic concepts of women health, child health and family welfare.

Objectives

At the conclusion of the course, the student will be able to:

- Learn about factors affecting the health of mother and child, the existing services for mother and child.
- Identify the family welfare concepts, principles and the role of health administration in the implementation of the programs.

Contents

- **Introduction for Reproductive Health,**
 - Evolution of MCH services in India,
 - Development of MCH activities in India.
- **The effect of Reproductive pattern on Maternal & Child Health.**
 - Measures of Reproductive Pattern.
 - Age at Marriage & Maternal Age
 - No of children born (Parity, Gravidity, birth order) complete family size.
 - Birth Intervals: Pregnancy Spacing preceding and succeeding intervals.
 - Measures of Health- Mortality
 - Maternal Morality Rate/Ratios
 - Infant & Child Morality
 - Fetal Loss
 - Measures of Morbidity
 - Maternal complication or illness of pregnancy/delivery
 - Maternal Nutrition and health

- Infant birth weight/Prematurity
 - Birth defects
 - Infants/Child Nutrition/ Infections
- Growth & Development
 - Height/Weight, Body mass index
 - Intelligent Quotient(IQ)
- Women's Health:
- Menarche, menopause and associated problems and management
- Programme interventions to improve Maternal and Child Health like :
 - MCH,
 - Safe Motherhood & Child Survival programme,
 - Reproductive & Child Health (RCH) programme –
 - Components, implementation & Outcomes- Critical Assessment,
 - National rural Health Mission- Salient feature, critical review - implementation
- Maternal Mortality-Major Causes for high MMR—India trends, states and selected countries
- Role of gender and domestic violence in women's health
- Infant Morality- Major causes trends and, differentials by states, especially on Kerala state & Tamilnadu.
- Integrated child development Services (ICDS)-
 - Organizational structures,
 - Outreach,
 - Critical assessment,
 - Impact
- School Health Programme- Critical Review, objectives & Components.
 - Child labour,
 - Child schooling and impact on health

- Childhood Disabilities- Problems, types, Causes, Preventive measures, Sources of data, community Rehabilitation.
- Family Welfare Programme: Historical View from birth control to family welfare, clinical Approach, Cafeteria Approach, Target based Approach, Target free approach, Organizational Structure, Eligible couple Survey. Key Personnel Involved ANM, National , state level Evaluations, Source of Data for the Programme, demographic goals, All India Hospital Post Partum Programme, Administration of Programme.
- National health policy- salient features, critical review Millennium Development goals- achievements.

Practicum

- Visit to maternity homes, PHCs
- Visit to NGOs working on women's issues.

Reference

- Park K: Park's textbook of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur.
- Morlev David: Pediatric priorities in the developing world London.
- Venkatachalam P.S. Nutrition for mother and child, ICMR, New Delhi.
- Gaopalan C and Chatterjee : Use of growth chart for promoting child nutrition.
- Nutrition Foundation of India.
- Clive Wood: contraception explained Geneva WHO
- Peel John and Potts Malcolm: Text book of contraception practices, Cambridge Uty. Press.
- Asha A. Bhendre & Thara Kanitkar : Principles of population studies, Himalaya publishing house, Bombay.
- Population reports: John Hopkins University, Baltimore, USA

Semester 3-Paper 3

(Note: The classes will be held in semester 3 and exams will be held at the end of semester 3)

Public Health Leadership and Management

Course Description:

The Public health leadership course provides students with knowledge and skill to manage and lead Public Health Programmes and Organizations.

Objectives

At the conclusion of the course, the student will be able to:

- Introduce basic concepts of leadership
- Learn the application of leadership skills in public health management

Contents

- **Basics of Leadership:**
 - Definition of Leadership
 - Public Health Leadership Principles
- Leadership Style & Practices:
 - Leadership Styles
 - Leadership traits
 - Leadership Practices
 - Talents
- Interface between Management & Leadership
 - Managers & Management
 - Case Studies
 - Transactional & transformational Leadership
 - Meta Leadership
 - Public Health Management.
- System & System Thinking

- **Leadership application in Public Health:**
 - Leadership Wheel & organizational Change
 - Levels of Leadership
 - Leadership and Assessment
 - Leadership and assurance
- **Leadership skills**
- **Leadership and communication**
 - Communication process
 - Interpersonal communication
 - Active listening
 - Public speaking
 - Communication and cultural sensitivity
 - Feedback
 - Delegation of authority
 - Framing
 - Meeting skills
 - Health communication
- **Leadership and people development**
 - Organizational staff relationship
 - Community relationship
- **Leadership and planning**
 - Community health planning
 - Strategic planning
 - Reinventing government
 - Public private partnership
- **Decision making**

- Conflict resolution
- Negotiation
- **Measuring of Leaders:**
 - Leadership competencies frame work
 - Credentialing & accreditation
 - Quantitative Leadership Assessment Technique.
- **Evaluation**
- Evaluation of transforms

Reference

- Public Health Leadership: Putting Principles Into Practice (Aspen Series In Public Health) by Ph. D. Rowitz Louis
- Public Health Leadership And Management: Cases And Context by Stuart A. Capper, Peter M. Ginter, Linda E. Swayne
- Essentials Of Management And Leadership In Public Health by Robert E. Burke, Leonard H. Friedman
- Transforming Public Health Practice: Leadership And Management Essentials by Bernard J. Healey, Cheryll D. Lesneski

MPH Third semester (Theory)

THEORY EXAMINATION

Duration: 3 Hrs

Max Marks: 100

Distribution of Marks

Type of questions	No of questions for each subject	No. of questions and marks for each question	Total Marks
Long Essay	3	3x10	30
Short Essay*	10	10x5	50
Objective type	10	10x2	20

*students are required to attempt 10 out of the 12 short essays.

Semester 3- Paper 4

(Note: The classes will be held in semester 3 and exams will be held at the end of semester 4 as paper 1)

Research Methodology

Course description:

The course enables the student to understand the various health issues and problem from the angle of an intuitive approach and develop an originality in their thinking and a deep insight into the issues with a critical mind in areas like planning, policy analysis and program evaluation.

Objectives

At the conclusion of the course, the student will be able to:

Equip students with quantitative and qualitative research techniques.

Contents

- Concept of health System
- Meaning , characteristics and guidelines for conducting Health systems research
- Types of Research in Public health management- descriptive, ecological, epidemiological, action and experimental research
- Role and methods of Review of literature as a tool for planning research
- Role of theory, Cause and effect phenomenon in research and formulation of hypothesis in research
- Quantitative and Qualitative research methods and their application in Public health
- Steps in Planning of Research studies in general
- Different types of surveys and their planning
- Planning and conducting participatory action research in public health management
- Research designs in clinical research and intervention studies
- Assessment of Performance indicators in Public health management
- Scope of Operation Research in Public health management
- Introduction to Important Operation Research methods-
 - Systems analysis
 - Linear programming technique
 - Network analysis
 - Queuing theory

Ethics:

- Ethics in research
- Conflict of interest and integrity in research
- Ethical review process- committees , roles and responsibilities
- Evaluation of risk and benefits of research
- Ethical reasoning
- Ethical issues in public health programmes.

Practicum

- Planning and developing research projects
- Data collection
- Analysis of data
- Designing research programmes

Reference

- Sarantakos : Social research, Mac Millan press, Harupshire, Australia
- Festinger & Katz : Social research, Longman, London
- Jahoda Maric et al: Research methods in social relations, free press, New York
- Kothari, C.R : Research methodology, Viswaprakasan, Bombay
- Park K : Park's text book of preventive and social medicine, M/s Banarasidas Bhanot, Jabalpur

Semester 3- Paper 5

(Note: The classes will be held in semester 3 and exams will be held at the end of semester 4 as paper 2)

Health Systems Management and Programme Planning

Course Description

This course introduces students to different health systems and its management.

Objectives

At the conclusion of the course, the student will be able to:

- Understand various health systems
- To discuss and learn public health care system in India
- To develop, implement and monitor various public health programmes.

Contents

- Introduction to health systems
- Challenges in public health system
- Evolution of public health system
- Public health care system – India
 - Primary health institutions (Primary health centre, sub centers, district hospitals)
 - Secondary health institutions
 - Tertiary health institutions
 - State and central government hospitals
 - Employee State Insurance
 - AYUSH
- Private health care system
 - Private hospitals, polyclinics
 - Nursing homes, dispensaries

- Private practitioners
 - Multispecialty hospital and medical college hospitals
- Voluntary health agencies
- Central and state health agencies and organizational structures
 - Planning at Central, State, District, Block and Village
 - Union Ministry of Health and Family Welfare,
 - Directorate General of Health Services,
 - Central Council of Health,
 - State Ministry of Health, State Health Directorate,
 - District Health Organization etc
- Comparison of health systems of various other countries
 - United states of America
 - United Kingdom
 - Canada
 - Germany
 - Russia
 - Japan
 - Africa
 - Thailand
 - Cuba
- Introduction to health care and programme planning
- Principles of Management
- Concept of Planning,
- Planning process, structure, and functions of planning
 - Planning cycle, project management cycle
 - Management analysis
 - Political aspect, economic aspects,
 - Epidemiological base for health planning

- Planning tools- log frame, PERT, CPM
 - Health Planning Models
- Health promotional planning
- Planning health facilities
- Community involvement
- Organization structure and process
- Monitoring and evaluation
- Quality assurance in project management
- Health planning in India, five years plans
- Healthcare Legislation in India:
 - Legal aspects of healthcare,
 - the Medical Termination of Pregnancy Act,
 - The maternity benefit act,
 - The immoral traffic(prevention) act,
 - The transplantation of human organs act,
 - PNDT Act,
 - The registration of birth and Death act,
 - The child labour (prohibition and regulation) act,
 - Biomedical waste Rules,
 - COPRA Act,
 - Indian factories act,
 - ESI act

PRACTICUM

- Visit to village for family health study
- Visit to understand Health system functioning
- Rural – i) Government ii) Private iii) Others
- Urban- i) Government ii) Private iii) Others
- Visit to understand other systems of Health eg. Railway, Military

Reference:

- Public Health Policy And Administration by Brij Mohan Mathur
Publisher: Commonwealth Publishers (1998)

MPH Fourth semester (Theory)

THEORY EXAMINATION

Duration: 3 Hrs

Max Marks: 100

Distribution of Marks

Type of questions	No of questions for each subject	No. of questions and marks for each question	Total Marks
Long Essay	3	3x10	30
Short Essay*	10	10x5	50
Objective type	10	10x2	20

*students are required to attempt 10 out of the 12 short essays.

Project Work/Field Experience or Internship

Description

The field experience provides the students with a practical experience in a public health setting, where students can apply and integrate the skills and knowledge gained in theory.

Objectives

At the conclusion of the course, the student will be able to:

- Apply and integrate the skills and knowledge gained in theory.
- Gain hand on experience on public health practice: such as planning, organisational structure, community interaction, etc.
- Demonstrate the competency in public health practice.
- Demonstrate leadership, teamwork, creativity, communication skills in public health domain.

Contents

Each candidate pursuing MPH Course is required to carry out Project Work/field experience or internship on a selected topic under the guidance of a recognized post graduate teacher after the submission of project proposal.

The topic for the Project Work should be chosen based on an area of interest and should be done in a reputed organization as described in the University guidelines. The student should choose the organization for the project work in any place where they could work under the constant guidance of the academic advisor and project supervisor/field supervisor allotted. The aim of the project work is to enable the student to gain an in-depth insight into a particular department or topic chosen for study.

Project work guidelines

Every candidate who is interested in project work shall submit to the Registrar (Academic) of the University in the prescribed proforma, two hard copies of project proposal containing particulars of proposed project work within 6 months from the date of commencement of the course or on or before the date notified by the University. The project proposal shall be sent through proper channel.

The University shall arrange for review of project proposal and if found suitable shall register the Project topic. No change in the Project topic

shall or guide shall be made without prior approval of the University.

The Project shall be written under the following headings:

- Introduction
- Aims or objectives of study
- Review of literature
- Materials and methods
- Results
- Discussion
- Conclusion
- Summary
- References
- Tables
- Annexure

The written text of Project shall not be less than 50 pages and shall not exceed 100 pages excluding references, tables, questionnaires and other annexure. It should be neatly typed in double line spacing on one side of paper (A4 size, 8.27" x 11.69") and bound properly. Spiral binding should not be done. A declaration by the candidate that the work was done by him/her shall be included. The project supervisor, head of the department and head of the institution shall certify the bonafide of the Project.

Four copies of Project shall be submitted to the university through proper channel along with a soft copy (CD), three months before the final examinations. It shall be assessed by two examiners appointed by the university, one internal and one external. 100 marks shall be awarded for Project, 50 marks for work and 50 marks for presentation. Acceptance of the Project is a pre-requisite for a candidate to be eligible to appear in the final examination.

Field Experience/Internship

Alternatively student can do a field experience/ practicum/ capstone project in any organization under the guidance of academic advisor and field supervisor.

Field experience/ internship is considered an important part of the academic curriculum, serving as a structured and significant educational experience that takes place in an agency, institution, or community in any developing or developed country, and under the supervision of Field Supervisors and the guidance of the student's Academic Advisor. The overall purpose of the field experience is to provide an opportunity for students to integrate theory and practice in

a public health work environment. The student contributes to a community's resources and to the solution of public health problems while developing personal confidence and leadership skills as a public health professional. While in work students could synthesize, hone skills and competencies in program design, implementation, management, and evaluation; research data collection, analysis, and reporting; and policy analyses and advocacy.

The field experience may include work in administrative, research, or clinical settings, or participation in ongoing health education, research, or program activities. The topics are individually selected and tailored to meet student needs. Decisions on the nature, location, objectives, and activities of the field experience are made through discussion and agreement among the student, academic advisor, and site/field supervisor.

The Site/Field Supervisor

The site/ field supervisor oversees the field experience at the chosen site. The site supervisor should have expertise in assigned project areas, experience and status within the organization, and an interest and competence in supervising and mentoring. The site supervisor also helps the student develop the MPH field experience activities (along with the Academic Advisor), and reviews and signs the Learning Contract prior to the field placement. Finally, the site supervisor writes a final evaluation of the field experience.

Academic Advisor (AA)

The Academic Advisor would be one of the internal faculties from the institute who is eligible to be the project guide. The AA advises and assists the student with the field experience site selection. Identifies and focuses coursework to prepare for the field experience, Academic advisor would review and approve the student's Field Experience Plan, Communicates with Field Experience Supervisor, Reviews the required student reports, student log and evaluations.

Student Field Experience Plan

Students pursuing a Field Experience (FE) are required to complete an FE Plan in collaboration with their Academic Advisor and Field Supervisor. Planning for the FE should begin at least 4 months before its projected starting date. The plan begins with the students developing their objectives. The plan includes a goal, learning objectives, specific strategies and activities for accomplishing those goals, timeline for completing goals, and any other considerations that may impact their field experience, and methods of evaluating goal

accomplishment (the deliverables). It is important that the student's objectives, strategies, and evaluation methods are realistic, appropriate, meaningful, and measurable. Details of the student's plan are developed and agreed to jointly by the student, field supervisor, and Academic Advisor. It represents the three-way agreement that is integral to the field experience.

Revisions of Plan While in the Field

Revisions to the initial FE Plan should be agreed to and submitted to the Academic Advisor and FE supervisor no later than the end of the second week of the placement. The students who fail to register their FE plan will have to work on the initial plan that was agreed. The FE Plan can be revisited and revised. If the FE moves in a different direction, the FE Plan can still be valid but the student must document any revisions, the reasons for the revisions and the results. If the student is unsure about progress, he/she needs to talk with the Field Supervisor, Academic Advisor. Everyone on the team shares a common goal—to help the student have a successful learning experience.

Field Experience Site

The field experience site/organization or any place where the students intends to do their activity must be an approved site, and the field supervisor must be pre-approved and have at least a master degree and one to two years of public health or relevant experience.

Report

During the placement/field experience/ project work Students are expected to keep a journal/ log book recording of their activities submit a report based on their experience (format mentioned in project report above). The report should include

- Description of activities performed during their field experience, along with any change or deviations from the FE Plans.
- What the students gained from the experience, identifying problems if they occurred.
- How much of their objectives were achieved.

Evaluation

The field supervisor evaluates the student's on-site performance. During the FE it is expected that there will be formal interaction between the academic advisor, field supervisor and student, more so between the academic advisor and field supervisor to discuss the student's progress.

The academic advisor along with the external evaluator will determine the final marks for the field experience /project work. This is based on the field supervisor's evaluation, the written journal/report and presentation defending the activity as well as any other relevant information.



